## **CLAIMS**

- 1. A method comprising: fetching coordinate data for a pixel to be rendered; fetching texel values corresponding to the pixel; filtering the texel values through a programmable filter; and outputting a filtered texture value for the pixel.
- 2. The method of Claim 1 wherein filtering texel values comprises: reading a control register; and using at least one location specified in the control register as a source location.
- 3. The method of Claim 1 wherein fetching coordinate data comprises: retrieving X, Y, Z coordinate data from a vertex pipeline.
- 4. The method of Claim 1 further comprising: writing coordinate fraction data to a plurality of registers.
- 5. The method of Claim 1 wherein outputting comprises: writing the filtered texture value to a register; and signaling a processor that the filtered texture value is available.
- 6. An apparatus comprising:
  - a fragment processing module;
- a programmable texture filtering module in communication with the fragment processing module to programmably filter texture data corresponding to at least one pixel; and
- a frame buffer processing module to combine filtered texture data with an existing frame buffer.
- 7. The apparatus of Claim 6 wherein the programmable texture filtering module comprises:
  - a plurality of control registers;
  - a plurality of source registers;
  - a plurality of temporary registers; and
  - at least one output register.

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- 8. The apparatus of Clam 7 wherein the source registers are read only.
- 9. The apparatus of Claim 7 wherein the plurality of control registers comprises:
  - a status register; an address register; an offset register; and a plurality of fraction registers.
- 10. The apparatus of Claim 7 where the plurality of the control registers comprise:

at least one sampling register have a bit corresponding to each of the source registers to indicate if sampling of a corresponding source register is required.

- 11. The apparatus of Claim 6 wherein the programmable texture filtering module comprises:
  - a plurality of processing cores to execute an instruction set.
- 12. The apparatus of Claim 6 wherein a subset of the plurality of cores are to execute a filtering program on at least one pixel in parallel.
- 13. A system comprising:
  - a memory;
- a plurality of texture processing cores (TPC) coupled to the memory to programmably filter texture data;
- a fragment processing module to apply the filtered texture data to at least one fragment; and
  - a display to display an image created using the at least one fragment.
- 14. The system of Claim 13 wherein the plurality of TPC and the fragment processing module are integrated with a host processor.
- 15. The system of Claim 13 wherein the plurality of TPCS and the fragment processing module reside in a graphics coprocessor.
- 16. The system of Claim 13 comprising:a register set associated with each TPC of the plurality.

- 17. The system of Claim 15 further comprising: an accelerated graphics port coupling the graphics coprocessor to the memory.
- 18. A computer readable storage media containing executable computer program instructions which when executed cause a digital processing system to perform a method comprising:

fetching coordinate data for a pixel to be rendered; fetching texel values corresponding to the pixel; filtering the texel values through a programmable filter; and outputting a filtered texture value for the pixel.

19. The computer readable storage media of Claim 18 which when executed cause a digital processing system to perform a method further comprising:

reading a control register; and using at least one location specified in the control register as a source location.

20. The computer readable storage media of Claim 18 which when executed cause a digital processing system to perform a method further comprising:

retrieving X, Y, Z coordinate data from a vertex pipeline.

21. The computer readable storage media of Claim 18 which when executed cause a digital processing system to perform a method further comprising:

writing coordinate fraction data to a plurality of registers.

22. The computer readable storage media of Claim 18 which when executed cause a digital processing system to perform a method further comprising:

writing the filtered texture value to a register; and signaling a processor that the filtered texture value is available.